

Subgroup Achievement and Gap Trends — Washington

K-12 enrollment — 1,031,846

The raw data used to develop these state profiles, including data for additional grade levels and years before 2002, can be found on the CEP Web site at www.cep-dc.org. Click on the link on the left for State Testing Data. Below the name of the report, click on the link for View State Profiles and Worksheets. Scroll down the page, and click on the Worksheet links for any state.

Subgroup Achievement Trends and Gap Trends — Key Findings

Summary

This year the Center on Education Policy analyzed data on the achievement of different groups of students in two distinct ways. First, we looked at grade 4 test results to determine whether the performance of various groups improved at three achievement levels—basic and above, proficient and above, and advanced. Second, we looked at gaps between these groups at the proficient level across three grades (grade 4, grade 8 in most cases, and a high school grade). These two types of analyses show whether elementary school achievement has generally gone up for different groups of students and whether achievement gaps at different grade levels have narrowed, widened, or stayed the same.

Overall, student achievement trends in Washington showed a mixed picture; trends were generally more positive in reading than in math. Similarly, there were more instances of achievement gaps narrowing in reading than in math.

Subgroup trends by achievement level at grade 4

- **Main trend:** Most subgroups made gains in reading and declines in math at three achievement levels—basic-and-above, proficient-and-above, and advanced. Specifically, 14 of the 18 trend lines analyzed across the three achievement levels in reading showed gains but 10 of 18 trend lines in math showed declines.

Gap trends at three grade levels

- **Main trend:** In most instances, gaps in the percentages of students scoring at the proficient level in reading narrowed between African American, Latino, or Native American students and white students, and between low-income and all tested students, at grades 4 and 8 and at the high school grade tested. Gaps widened in most instances between these subgroups in math. Specifically, 9 of the 12 trend lines analyzed in reading showed evidence of gaps narrowing and 9 of 12 trend lines in math showed evidence of gaps widening.

Data notes

- **Limited data:** Due to changes in Washington's testing program, only three years of comparable test data (2006-2008) are available at the middle school level, the minimum span needed to discern a trend. Comparable data go back to 2002 for the other grade levels.

- Subgroups analyzed: Trends were analyzed for white, African American, Latino, Asian American, Native American, and low-income students. Trends for students with disabilities, English language learners, and male and female students have not been summarized because they will be discussed in separate reports.
- Grades analyzed: Analyses of subgroup trends by three achievement levels are limited to one elementary grade because of the massive amounts of data involved and because this is the pilot year of a process that CEP hopes to extend to the middle and high school levels in future years. Analyses of achievement gap trends cover three grade levels: grade 4, grade 8, and the high school grade tested for NCLB.

Data Limitations

Years of comparable percentage proficient data	1999 through 2008, grades 4, 7, and 10 2006 through 2008, grades 3, 5, 6, and 8
Years of comparable mean scale score data	1999 through 2008, grades 4, 7, and 10 2006 through 2008, grades 3, 5, 6, and 8
Disaggregated data for all subgroups and comparison groups	Available 2002 through 2008 for grades 4 and 10; 2006 through 2008 for grade 8 Percentage proficient data not available until 2003 and mean scale score data not available until 2007 for low-income subgroup Percentage proficient and mean scale score data not available until 2008 for comparison groups of students who are <i>not</i> low-income, disabled, or English language learners (ELLs), so the subgroups of low-income students, students with disabilities, and ELLs are compared with all tested students in the state
Numbers of test-takers by subgroup	Not available until 2004 for the low-income subgroup

Test Characteristics

The characteristics highlighted below are for the state reading and mathematics tests used for accountability under the No Child Left Behind Act (NCLB).

Test(s) used for NCLB accountability	Washington Assessment of Student Learning (WASL) Washington Alternate Assessment System (WAAS)
Grades tested for NCLB accountability	3–8, 10
State labels for achievement levels	WA uses four achievement levels: Level 1, Level 2, Level 3, and Level 4

4. For our analyses we treated Level 2 as Basic, Level 3 as Proficient, and Level 4 as Advanced.

High school NCLB test also used as an exit exam?

Yes

First year test used

1997: Grade 4

1998: Grade 7

1999: Grade 10

2006: Grades 3, 5, 6, and 8

Time of test administration

Spring

Major changes in testing system (2002–present)

2005–06: Testing expanded to include grades 3–8, 10

2008: Passing the High School WASL became a requirement for graduation.

Achievement by Subgroup — Trends at the Elementary Level

Note: The tables in this profile of subgroup achievement and gap trends begin with table 7. Tables 1 through 6 can be found in the companion state profile of general achievement trends.

Table WA-7. Percentages of Grade 4 Students by Racial or Ethnic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced	27%	24%	28%	36%	34%	29%	34%	1.2
Proficient and Above	66%	67%	74%	80%	81%	76%	71%	1.0
Basic and Above	94%	92%	94%	94%	95%	93%	93%	-0.1
White								
Advanced	31%	28%	32%	41%	39%	33%	39%	1.4
Proficient and Above	71%	73%	80%	85%	85%	80%	77%	1.0
Basic and Above	96%	94%	95%	95%	97%	94%	95%	-0.2
African American								
Advanced	15%	13%	16%	21%	21%	17%	20%	0.9
Proficient and Above	49%	52%	62%	69%	68%	63%	58%	1.5
Basic and Above	90%	88%	91%	90%	93%	88%	90%	-0.1
Latino								
Advanced	12%	9%	13%	18%	19%	15%	17%	0.8
Proficient and Above	42%	41%	54%	61%	66%	59%	52%	1.7
Basic and Above	86%	82%	87%	87%	91%	88%	88%	0.2
Asian								
Advanced	31%	26%	33%	42%	41%	37%	40%	1.5
Proficient and Above	71%	68%	78%	83%	86%	82%	78%	1.2
Basic and Above	96%	94%	97%	96%	98%	96%	95%	-0.1
Native American								
Advanced	16%	12%	15%	20%	21%	17%	18%	0.3
Proficient and Above	51%	52%	59%	64%	69%	61%	54%	0.6
Basic and Above	91%	88%	90%	88%	92%	87%	86%	-0.8

Table reads: The percentage of white 4th graders who scored at the advanced level on the state reading test increased from 31% in 2002 to 39% in 2008. During this period, the average yearly gain in the percentage advanced in reading for white 4th graders was 1.4 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

**Table WA-8. Percentage of Grade 4 Students by Demographic Subgroup
Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading**

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced	27%	24%	28%	36%	34%	29%	34%	1.2
Proficient and Above	66%	67%	74%	80%	81%	76%	71%	1.0
Basic and Above	94%	92%	94%	94%	95%	93%	93%	-0.1
Low-income students								
Advanced	NA	14%	16%	22%	22%	17%	20%	1.1
Proficient and Above	NA	52%	61%	68%	70%	63%	57%	1.1
Basic and Above	NA	88%	90%	90%	92%	89%	89%	0.3
Students with disabilities ³								
Advanced	8%	7%	9%	12%	11%	8%	9%	-0.9
Proficient and Above	30%	31%	39%	44%	47%	37%	32%	-7.7
Basic and Above	77%	70%	75%	73%	78%	65%	69%	-4.4
English language learners ³								
Advanced	5%	3%	4%	8%	9%	4%	4%	-2.2
Proficient and Above	25%	24%	36%	46%	50%	36%	29%	-10.1
Basic and Above	77%	72%	81%	80%	85%	78%	78%	-3.5
Female								
Advanced	31%	29%	31%	39%	39%	34%	39%	1.3
Proficient and Above	69%	72%	78%	82%	84%	80%	76%	1.1
Basic and Above	95%	94%	95%	95%	97%	95%	95%	-0.1
Male								
Advanced	23%	20%	25%	33%	30%	24%	29%	1.0
Proficient and Above	63%	62%	71%	77%	78%	71%	67%	0.7
Basic and Above	93%	91%	93%	92%	94%	91%	91%	-0.3

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state reading test increased from 14% in 2003 to 20% in 2008. During this period, the average yearly gain in the percentage advanced in reading for low-income 4th graders was 1.1 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

**Table WA-9. Percentages of Grade 4 Students by Racial or Ethnic Subgroup
Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics**

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced	25%	27%	32%	33%	28%	33%	30%	0.8
Proficient and Above	52%	55%	60%	61%	59%	58%	53%	0.2
Basic and Above	79%	79%	82%	81%	80%	78%	76%	-0.4
White								
Advanced	28%	31%	36%	39%	32%	38%	35%	1.0
Proficient and Above	57%	62%	66%	68%	65%	65%	60%	0.5
Basic and Above	84%	84%	87%	86%	85%	83%	82%	-0.3
African American								
Advanced	10%	13%	15%	14%	12%	14%	13%	0.5
Proficient and Above	29%	36%	38%	38%	36%	35%	31%	0.4
Basic and Above	59%	64%	68%	66%	63%	60%	58%	-0.2
Latino								
Advanced	10%	11%	15%	14%	12%	15%	12%	0.4
Proficient and Above	29%	31%	39%	36%	37%	35%	31%	0.3
Basic and Above	60%	60%	67%	63%	63%	60%	58%	-0.4
Asian								
Advanced	31%	32%	39%	41%	39%	43%	41%	1.6
Proficient and Above	59%	61%	67%	68%	68%	67%	64%	0.7
Basic and Above	83%	82%	87%	86%	86%	84%	83%	-0.1
Native American								
Advanced	14%	14%	18%	18%	16%	17%	14%	-0.1
Proficient and Above	36%	38%	42%	42%	41%	39%	32%	-0.6
Basic and Above	68%	67%	71%	67%	66%	62%	57%	-1.8

Table reads: The percentage of white 4th graders who scored at the advanced level on the state math test increased from 28% in 2002 to 35% in 2008. During this period, the average yearly gain in the percentage advanced in math for white 4th graders was 1.0 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

**Table WA-10. Percentage of Grade 4 Students by Demographic Subgroup
Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics**

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced	25%	27%	32%	33%	28%	33%	30%	0.8
Proficient and Above	52%	55%	60%	61%	59%	58%	53%	0.2
Basic and Above	79%	79%	82%	81%	80%	78%	76%	-0.4
Low-income students								
Advanced	NA	16%	19%	18%	15%	18%	16%	-0.1
Proficient and Above	NA	40%	45%	44%	42%	40%	36%	-0.8
Basic and Above	NA	68%	73%	70%	69%	65%	63%	-1.0
Students with disabilities ³								
Advanced	8%	9%	12%	12%	10%	11%	9%	-0.2
Proficient and Above	23%	25%	29%	29%	27%	24%	20%	-3.5
Basic and Above	49%	49%	54%	52%	49%	41%	39%	-4.9
English language learners ³								
Advanced	6%	6%	9%	8%	6%	5%	5%	-0.5
Proficient and Above	18%	20%	26%	25%	24%	17%	15%	-4.5
Basic and Above	46%	47%	56%	53%	50%	40%	39%	-5.9
Female								
Advanced	25%	28%	32%	33%	29%	34%	30%	0.9
Proficient and Above	52%	57%	61%	61%	60%	59%	54%	0.4
Basic and Above	79%	81%	83%	82%	82%	79%	77%	-0.3
Male								
Advanced	25%	26%	31%	34%	28%	31%	29%	0.7
Proficient and Above	52%	54%	59%	61%	58%	56%	52%	0.0
Basic and Above	79%	78%	82%	81%	79%	76%	75%	-0.7

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state math test was 16% in 2003 and in 2008. During this period, the average yearly loss in the percentage advanced in math for low-income 4th graders was 0.1 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

Achievement by Subgroup — Gap Trends (Percentages Proficient)**Table WA-11. Subgroup Achievement Trends in Reading by Percentages Proficient**

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 10				
	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group
All tested students	02-08	66%	71%	1.0		06-08	70%	66%	-2.1		02-08	59%	78%	3.1	
White	02-08	71%	77%	1.0		06-08	74%	69%	-2.3		02-08	65%	82%	2.9	
African American	02-08	49%	58%	1.5	L	06-08	54%	52%	-0.6	L	02-08	36%	63%	4.5	L
Latino	02-08	42%	52%	1.7	L	06-08	55%	52%	-1.5	L	02-08	35%	63%	4.7	L
Asian	02-08	71%	78%	1.2	L	06-08	78%	76%	-1.0	L	02-08	62%	83%	3.5	L
Native American	02-08	51%	54%	0.6	S	06-08	56%	49%	-3.2	S	02-08	44%	62%	3.1	L
All tested students	03-08	67%	71%	0.9		06-08	70%	66%	-2.1		03-08	60%	78%	3.5	
Low-income	03-08	52%	57%	1.1	L	06-08	57%	52%	-2.3	S	03-08	43%	65%	4.5	L
All tested students	06-08	81%	71%	-4.7		06-08	70%	66%	-2.1		06-08	82%	78%	-2.0	
Students with disabilities ³	06-08	47%	32%	-7.7	S	06-08	21%	16%	-2.4	S	06-08	36%	34%	-1.4	L
All tested students	06-08	81%	71%	-4.7		06-08	70%	66%	-2.1		06-08	82%	78%	-2.0	
English language learners ³	06-08	50%	29%	-10.1	S	06-08	27%	22%	-2.8	S	06-08	35%	37%	0.9	L
Female	02-08	69%	76%	1.1		06-08	75%	72%	-1.6		02-08	67%	81%	2.3	
Male	02-08	63%	67%	0.7	S	06-08	65%	60%	-2.6	S	02-08	53%	74%	3.6	L

Table reads: In 2002, 71% of white 4th graders and 49% of African American 4th graders scored at the proficient level on the state reading test. In 2008, 77% of

white 4th graders and 58% of African American 4th graders scored at the proficient level in reading. Between 2002 and 2008, the percentage proficient improved at an average rate of 1.0 percentage point per year for white students and 1.5 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table WA-12. Subgroup Achievement Trends in Mathematics by Percentages Proficient

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 10				
	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group
All tested students	02-08	52%	53%	0.2		06-08	49%	52%	1.4		02-08	37%	44%	1.2	
White	02-08	57%	60%	0.5		06-08	55%	57%	1.4		02-08	42%	50%	1.4	
African American	02-08	29%	31%	0.4	S	06-08	22%	28%	2.8	L	02-08	13%	19%	1.0	S
Latino	02-08	29%	31%	0.3	S	06-08	26%	30%	1.8	L	02-08	14%	23%	1.4	E
Asian	02-08	59%	64%	0.7	L	06-08	60%	64%	2.1	L	02-08	45%	56%	1.9	L
Native American	02-08	36%	32%	-0.6	S	06-08	30%	32%	0.9	S	02-08	21%	25%	0.7	S
All tested students	03-08	55%	53%	-0.4		06-08	49%	52%	1.4		03-08	39%	44%	1.0	
Low-income	03-08	40%	36%	-0.8	S	06-08	31%	33%	1.1	S	03-08	24%	26%	0.4	S
All tested students	06-08	59%	53%	-2.8		06-08	49%	52%	1.4		06-08	51%	44%	-3.2	
Students with disabilities ³	06-08	27%	20%	-3.5	S	06-08	8%	8%	0.1	S	06-08	9%	6%	-1.6	L
All tested students	06-08	59%	53%	-2.8		06-08	49%	52%	1.4		06-08	51%	44%	-3.2	
English language learners ³	06-08	24%	15%	-4.5	S	06-08	10%	10%	-0.2	S	06-08	13%	12%	-0.5	L
Female	02-08	52%	54%	0.4		06-08	49%	52%	1.7		02-08	38%	43%	0.8	
Male	02-08	52%	52%	0.0	S	06-08	48%	51%	1.1	S	02-08	37%	46%	1.5	L

Table reads: In 2002, 57% of white 4th graders and 29% of African American 4th graders scored at the proficient level on the state math test. In 2008, 60% of white 4th graders and 31% of African American 4th graders scored at the proficient level in math. Between 2002 and 2008, the percentage proficient improved at an average rate of 0.5 percentage point per year for white students and 0.4 percentage points per year for African American students, indicating a smaller rate of gain

and a widening of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Achievement by Subgroup — Gap Trends (Mean Scale Scores)

Table WA-13. Achievement Gap Trends in Reading by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 10				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	02-08	407.3	410.7	0.6		06-08	408.8	406.3	-1.2		02-08	407.7	423.9	2.7	
	SD	02-08	20.2	23.6			06-08	24.7	25.9			02-08	31.6	31.8		
White	Mean SS	02-08	409.8	414.1	0.7		06-08	411.7	408.5	-1.6		02-08	411.0	427.5	2.8	
	SD	02-08	19.5	22.9			06-08	23.4	24.8			02-08	30.5	30.8		
African American	Mean SS	02-08	399.5	402.8	0.6	S	06-08	400.1	397.6	-1.2	L	02-08	390.3	409.3	3.2	L
	SD	02-08	19.6	21.9			06-08	24.6	26.0			02-08	31.5	31.3		
Latino	Mean SS	02-08	395.9	399.5	0.6	S	06-08	400.1	397.4	-1.4	L	02-08	389.1	410.2	3.5	L
	SD	02-08	20.3	22.1			06-08	24.2	27.1			02-08	31.4	31.3		
Asian	Mean SS	02-08	409.5	415.0	0.9	L	06-08	415.0	413.3	-0.9	L	02-08	409.5	428.4	3.2	L
	SD	02-08	19.7	23.5			06-08	25.2	26.2			02-08	31.4	31.7		
Native American	Mean SS	02-08	400.3	400.2	0.0	S	06-08	401.5	396.1	-2.7	S	02-08	397.2	411.1	2.3	S
	SD	02-08	19.2	23.4			06-08	24.3	26.3			02-08	31.5	31.4		
All tested students	Mean SS	07-08	410.1	410.7	NA		07-08	406.8	406.3	NA		07-08	424.7	423.9	NA	
	SD	07-08	20.7	23.6			07-08	25.8	25.9			07-08	29.8	31.8		
Low-income	Mean SS	07-08	402.5	401.9	NA	NA	07-08	397.5	397.7	NA	NA	07-08	412.5	412.2	NA	NA
	SD	07-08	20.5	22.3			07-08	25.9	26.5			07-08	29.8	31.3		
All tested students	Mean SS	06-08	413.8	410.7	-1.5		06-08	408.8	406.3	-1.2		06-08	431.7	423.9	-3.9	
	SD	06-08	21.3	23.6			06-08	24.7	25.9			06-08	34.4	31.8		
Students with disabilities ³	Mean SS	06-08	396.4	388.1	-4.1	S	06-08	380.6	373.8	-3.4	S	06-08	394.0	387.2	-3.4	L
	SD	06-08	23.5	24.1			06-08	24.7	26.4			06-08	30.4	30.7		
All tested students	Mean SS	06-08	413.8	410.7	-1.5		06-08	408.8	406.3	-1.2		06-08	431.7	423.9	-3.9	
	SD	06-08	21.3	23.6			06-08	24.7	25.9			06-08	34.4	31.8		
English language learners ³	Mean SS	06-08	396.2	388.1	-4.1	S	06-08	384.6	378.7	-3.0	S	06-08	389.4	389.0	-0.2	L
	SD	06-08	21.0	18.7			06-08	23.1	24.9			06-08	29.9	28.6		
Female	Mean SS	02-08	409.6	414.0	0.8		06-08	413.5	410.7	-1.4		02-08	413.8	428.3	2.4	
	SD	02-08	20.3	23.3			06-08	23.9	25.1			02-08	29.9	31.7		

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
Male	Mean SS	02-08	405.2	407.6	0.4	S	06-08	405.7	402.1	-1.8	S	02-08	401.8	419.9	3.0	L
	SD	02-08	19.9	23.5			06-08	24.0	26.0			02-08	32.1	31.4		

Table reads: In 2002, the mean scale score on the state 4th grade reading test was 409.8 for white students and 399.5 for African American students. In 2008, the mean scale score in 4th grade reading was 414.1 for white students and 402.8 for African American students. Between 2002 and 2008, the mean scale score improved at an average yearly rate of 0.7 points for white students and 0.6 points African American students, indicating a widening of the achievement gap for African Americans.

Note: The WASL-Reading is scored on a scale of 225-525.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table WA-14. Subgroup Achievement Trends in Mathematics by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 10				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	02-08	400.6	402.9	0.4		06-08	397.0	401.2	2.1		02-08	388.7	394.9	1.0	
	SD	02-08	34.0	41.9			06-08	40.8	42.8			02-08	38.5	41.2		
White	Mean SS	02-08	405.0	409.5	0.7		06-08	403.3	407.0	1.9		02-08	393.0	400.6	1.3	
	SD	02-08	32.6	40.2			06-08	38.7	41.1			02-08	37.1	39.5		
African American	Mean SS	02-08	381.4	381.6	0.0	S	06-08	371.9	376.8	2.5	L	02-08	361.5	367.4	1.0	S
	SD	02-08	32.1	38.2			06-08	37.1	39.5			02-08	34.6	37.8		
Latino	Mean SS	02-08	382.0	381.7	0.0	S	06-08	376.7	379.0	1.2	S	02-08	364.4	372.3	1.3	L
	SD	02-08	32.7	37.3			06-08	36.5	38.4			02-08	34.6	36.8		
Asian	Mean SS	02-08	406.2	414.8	1.4	L	06-08	409.7	414.7	2.5	L	02-08	395.1	405.8	1.8	L
	SD	02-08	34.4	45.0			06-08	42.5	45.7			02-08	40.4	43.5		
Native American	Mean SS	02-08	388.3	381.6	-1.1	S	06-08	380.6	382.4	0.9	S	02-08	373.9	378.2	0.7	S
	SD	02-08	32.5	39.5			06-08	37.0	38.7			02-08	36.2	37.0		
All tested students	Mean SS	07-08	405.0	402.9	NA		07-08	398.3	401.2	NA		07-08	397.9	394.9	NA	
	SD	07-08	41.7	41.9			07-08	42.5	42.8			07-08	39.3	41.2		
Low-income	Mean SS	07-08	387.7	386.4	NA	NA	07-08	379.6	382.3	NA	NA	07-08	379.7	376.5	NA	NA
	SD	07-08	38.8	38.4			07-08	39.9	39.7			07-08	37.9	38.2		
All tested students	Mean SS	06-08	406.0	402.9	-1.6		06-08	397.0	401.2	2.1		06-08	401.2	394.9	-3.1	
	SD	06-08	37.2	41.9			06-08	40.8	42.8			06-08	37.5	41.2		
Students with disabilities ³	Mean SS	06-08	379.0	366.8	-6.1	S	06-08	348.6	348.3	-0.2	S	06-08	357.3	345.1	-6.1	S
	SD	06-08	36.0	42.4			06-08	35.8	37.0			06-08	35.3	33.4		
All tested students	Mean SS	06-08	406.0	402.9	-1.6		06-08	397.0	401.2	2.1		06-08	401.2	394.9	-3.1	
	SD	06-08	37.2	41.9			06-08	40.8	42.8			06-08	37.5	41.2		
English language learners ³	Mean SS	06-08	375.8	366.0	-4.9	S	06-08	356.6	354.0	-1.3	S	06-08	361.8	354.7	-3.6	S
	SD	06-08	32.2	33.1			06-08	34.6	34.6			06-08	35.3	36.0		
Female	Mean SS	02-08	400.8	404.1	0.6		06-08	398.7	402.1	1.7		02-08	389.5	393.2	0.6	

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
	SD	02-08	33.8	41.1			06-08	39.0	41.2			02-08	36.9	39.5		
Male	Mean SS	02-08	400.4	401.8	0.2	S	06-08	397.4	400.3	1.5	S	02-08	388.0	396.6	1.4	L
	SD	02-08	34.1	42.6			06-08	41.6	44.3			02-08	39.9	42.7		

Table reads: In 2002, the mean scale score on the state 4th grade math test was 405.0 for white students and 381.4 for African American students. In 2008, the mean scale score in 4th grade math was 409.5 for white students and 381.6 for African American students. Between 2002 and 2008, the mean scale score improved at an average yearly rate of 0.7 points for white students and remained the same for African American students, indicating a widening of the achievement gap for African Americans.

Note: The WASL-Mathematics is scored on a scale of 125-575.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table WA-15. Numbers of Test-Takers

Subgroup	Subject	Grade 4					Grade 8					Grade 10				
		Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year
All tested students	Reading	02-08	75,074	74,670	-0.5%	100.0%	06-08	78,304	75,146	-4.0%	100.0%	02-08	69,826	62,839	-10.0%	100.0%
	Math	02-08	75,282	74,348	-1.2%	100.0%	06-08	78,226	74,700	-4.5%	100.0%	02-08	69,987	65,265	-6.7%	100.0%
White	Reading	02-08	53,615	48,106	-10.3%	64.4%	06-08	56,605	50,295	-11.1%	66.9%	02-08	52,261	43,801	-16.2%	69.7%
	Math	02-08	53,768	47,920	-10.9%	64.5%	06-08	56,605	49,993	-11.7%	66.9%	02-08	52,401	45,257	-13.6%	69.3%
African American	Reading	02-08	4,136	4,278	3.4%	5.7%	06-08	4,557	4,270	-6.3%	5.7%	02-08	3,164	3,351	5.9%	5.3%
	Math	02-08	4,143	4,241	2.4%	5.7%	06-08	4,557	4,217	-7.5%	5.6%	02-08	3,163	3,517	11.2%	5.4%
Latino	Reading	02-08	8,502	11,927	40.3%	16.0%	06-08	10,057	10,758	7.0%	14.3%	02-08	5,382	7,694	43.0%	12.2%
	Math	02-08	8,541	11,840	38.6%	15.9%	06-08	10,056	10,693	6.3%	14.3%	02-08	5,400	8,077	49.6%	12.4%
Asian	Reading	02-08	5,410	6,422	18.7%	8.6%	06-08	6,296	6,391	1.5%	8.5%	02-08	5,362	5,161	-3.7%	8.2%
	Math	02-08	5,401	6,442	19.3%	8.7%	06-08	6,296	6,412	1.8%	8.6%	02-08	5,363	5,469	2.0%	8.4%
Native American	Reading	02-08	2,130	2,118	-0.6%	2.8%	06-08	2,419	1,914	-20.9%	2.5%	02-08	1,781	1,649	-7.4%	2.6%
	Math	02-08	2,154	2,098	-2.6%	2.8%	06-08	2,419	1,878	-22.4%	2.5%	02-08	1,779	1,663	-6.5%	2.5%
Low-income	Reading	07-08	31,603	31,478	-0.4%	42.2%	07-08	29,271	28,101	-4.0%	37.4%	07-08	25,072	19,885	-20.7%	31.6%
	Math	07-08	31,603	31,252	-1.1%	42.0%	07-08	29,271	27,806	-5.0%	37.2%	07-08	25,072	20,520	-18.2%	31.4%
Students w/ disabilities	Reading	06-08	10,269	9,533	-7.2%	12.8%	06-08	8,925	7,619	-14.6%	10.1%	06-08	7,988	6,128	-23.3%	9.8%
	Math	06-08	10,269	9,223	-10.2%	12.4%	06-08	8,924	7,133	-20.1%	9.5%	06-08	7,988	5,271	-34.0%	8.1%
English language learners	Reading	06-08	6,555	6,267	-4.4%	8.4%	06-08	3,811	3,338	-12.4%	4.4%	06-08	3,461	2,741	-20.8%	4.4%
	Math	06-08	6,555	6,267	-4.4%	8.4%	06-08	3,810	3,369	-11.6%	4.5%	06-08	3,461	2,790	-19.4%	4.3%
Female	Reading	02-08	36,348	36,505	0.4%	48.9%	06-08	39,104	36,890	-5.7%	49.1%	02-08	34,579	29,939	-13.4%	47.6%
	Math	02-08	36,398	36,324	-0.2%	48.9%	06-08	39,103	36,729	-6.1%	49.2%	02-08	34,636	31,717	-8.4%	48.6%
Male	Reading	02-08	38,660	38,165	-1.3%	51.1%	06-08	42,261	38,255	-9.5%	50.9%	02-08	35,079	32,894	-6.2%	52.3%
	Math	02-08	38,821	38,024	-2.1%	51.1%	06-08	42,261	37,970	-10.2%	50.8%	02-08	35,180	33,537	-4.7%	51.4%

Table reads: In 2002, 53,615 students in the white subgroup took the state 4th grade reading test. By 2008, the number of white test-takers had fallen to 48,106 students, a decrease of 10.3%. In 2008, the white subgroup made up 64.4% of the 74,670 4th graders taking the reading test that year.

Note: **Bold** type indicates that the number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data.

Key Terms

Percentage proficient (and above) — The percentage of students in a group who score at and above the cut score for “proficient” performance on the state test used to determine progress under NCLB. The Act requires states to report student test performance in terms of at least three achievement levels: basic, proficient, and advanced. Adequate yearly progress determinations are based on the percentage of students scoring at the proficient level and above.

Percentage basic (and above) — The percentage of students in a group who score at and above the cut score for “basic” performance on the state test used to determine progress under NCLB.

Percentage advanced — The percentage of students in a group who reach or exceed the cut score for “advanced” performance on the state test used to determine progress under NCLB.

Moderate-to-large gain — For the percentage basic, proficient, or advanced, an average gain of 1 or more percentage points per year. For effect size, an average gain of 0.02 or greater per year.

Slight gain — For the percentage basic, proficient, or advanced, an average gain of less than 1 percentage point per year. For effect size, an average gain of less than 0.02 per year.

Moderate-to-large decline — For the percentage basic, proficient, or advanced, an average decline of 1 or more percentage points per year. For effect size, an average decline of 0.02 or greater per year.

Slight decline — For the percentage basic, proficient, or advanced, an average decline of less than 1 percentage points per year. For effect size, an average decline of less than 0.02 per year.

Effect size — A statistical tool that conveys the amount of difference between test results using a common unit of measurement which does not depend on the scoring scale for a particular test.

Accumulated annual effect size — The cumulative gain in effect size over a range of years.

Mean scale score — The arithmetical average of a group of test scores, expressed on a common scale for a particular state's test. The mean is calculated by adding the scores and dividing the sum by the number of scores.

Standard deviation — A measure of how much test scores tend to deviate from the mean—in other words, how spread out or bunched together test scores are. If students' scores are bunched together, with many scores close to the mean, then the standard deviation will be small. If scores are spread out, with many students scoring at the high or low ends of the scale, then the standard deviation will be large.

Cautions and Explanations

Different labels for achievement levels — For consistency, all of the state profiles developed for this report use a common set of labels (basic, proficient, and advanced) for the main achievement levels required by NCLB. In practice, however, some states may use different labels, such as “meets standard” instead of proficient, and some states have established additional achievement levels beyond those required by NCLB.

Different names for subgroups — For the sake of consistency and ease of data tabulation, all of the state profiles developed for this report use a common set of names for the major student subgroups. In practice, however, states use various names for subgroups that may differ from those used here (such as using “Hispanic” instead of “Latino,” or “special education students” instead of “students with disabilities”). Moreover, a few states separately track the performance of subgroups not included in the analyses for this report.

Special caution for students with disabilities and English language learners — Trends for students with disabilities and English language learners should be interpreted with caution because changes in federal guidance and state accountability plans may have altered which students in these subgroups are tested for accountability purposes, how they are tested, and when their test scores are counted as proficient under NCLB. These factors could affect the year-to-year comparability of test results.

Inclusion of former English language learners — In many states, the subgroup of English language learners (also known as limited English proficient students) includes students who were formerly English language learners but who have achieved English language proficiency or fluency in the last two years. Federal NCLB regulations permit states to include these formerly ELL students (sometimes referred to as “redesignated fluent English proficient” students) in the ELL subgroup for up to two years for purposes of NCLB accountability.

Limitations of percentage proficient measure — The percentage proficient, the main gauge of student performance under NCLB, can be easily understood and gives a snapshot of how many students have met their state’s performance expectations. But it also has several limitations as a measure of student achievement. Users of percentage proficient data should keep in mind these limitations, particularly the following:

- * “Proficient” means different things across different states. States vary widely in curriculum, learning expectations, and tests, and state tests differ considerably in their difficulty and cut scores for proficient performance.
- * Although this study has taken steps to avoid comparing test data where there have been “breaks” in comparability resulting from new tests, changes in content standards, revised cut scores, or other major changes in testing programs, the year-to-year comparability of test results in the same state may still be affected by less obvious policy and demographic changes.
- * Changes in student performance may occur that are not reflected in percentage proficient data, such as an increase in the number of students reaching performance levels below and above proficient (such as the basic or advanced levels).
- * The size of the achievement gaps between various subgroups depends in part on where a state sets its cut score for proficiency. For example, if a proficiency cut score is set so high that almost nobody reaches it or so low that almost everyone reaches it, there will be little apparent achievement gap. By contrast, if the cut score is closer to the mean test score, the gaps between subgroups will be more apparent.

Difficulty of attributing causes — Although the tables above show trends in test scores since the enactment of NCLB, one cannot assume that these trends have occurred *because* of NCLB. It is always difficult to determine a cause-and-effect relationship between test score trends and any specific education policy or program due to the many federal, state, and local reforms undertaken in recent years and due to the lack of an appropriate “control” group of students not affected by NCLB.